

# STARWARS

## Flight Control Calibration

The STAR WARS\* game has a self-calibrating flight control. The game circuitry monitors the position of the cursor on the display in relation to the flight control vertical and horizontal position. Calibration is quickly accomplished by moving the cursor to all four extreme edges of the display. Calibrating is also accomplished during normal game play, but may take a few minutes to optimize.

# Testing the NOVRAM

Do not test the NOVRAM unnecessarily. Each test decreases the life of the NOVRAM.

## Freeze Mode Warning

Switch 8 on the Option Switch located at 10D puts the game into a freeze-frame mode, which can be advanced frame-by-frame by pressing the Left Trigger. There are some sections of the game that use an extra high brightness level in order to achieve a special effect such as the Death Star explosion.

During normal game play these effects last only a short time and there is no danger of harming the cathode-ray tube (CRT) or the display electronics. However, if you use Freeze Frame during these times and for an extended period, you may damage the CRT (by burning a hole in its phosphor) or damage the high-voltage board.

# Main Printed-Circuit Board Component Changes

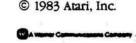
On Rev. A and Rev. B Main Boards make sure that R3 is 68 Ohms. It should be either a 68-Ohm resistor, or a 220-Ohm resistor parallel with a 100-Ohm resistor. (All resistors are  $\frac{1}{2}$  Watt,  $\pm 5\%$ , Carbon Film.)

C3 has been changed from a 39 pF to a 100 pF capacitor. These changes are in the 12-MHz clock circuit and will ensure that the oscillator will start on power-up. Some boards exhibited a power-up problem when tested on the PAT 9000<sup>TM</sup> test fixture.

#### **AMD RAMS**

In positions 5F and 5H on the Main Board, do not use RAMs from Advanced Micro Devices (labeled AM9128-15 or AM9128-10). The symptoms of bad RAMs are self-test and the Matrix Processor tests run okay, yet the three-dimensional objects in the game (stars, TIE fighters, and towers) become distorted. Parts from Synertek (SY2128) are usable, and parts from other manufacturers will probably work.

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# **Option Change**

To maximize your STAR WARS earnings and longevity, we have specifically designed STAR WARS to give players more value in game times. We strongly suggest you change this game to 2 coins/play. This advice is based on extensive test results. To do this, change the options to:

2 COINS/PLAY (½ credit) 6 SHIELDS HARD DIFFICULTY 1 BONUS SHIELD

## Changing the Game Options

After entering self-test, press the auxiliary coin switch to obtain the game options display. Any of the options displayed in the first section of the Game Options display can be changed without setting the option switches on the Main Board. Select the option to be changed by moving the flight control up or down. Press the left-hand fire trigger to cycle through the available option setting. The changed option is immediately stored in the NOVRAM and is unaffected by turning off the power or the self-test switch.

If you change the options by using the option switches located on the Main Board, you will have to go back to the Game Options display and select the line marked "Reset Options." By changing this to "Yes" it will reset the NOVRAM to correspond to the switches on the Main Board. Failure to do this will result in unchanged options. If the NOVRAM fails the microprocessor will then read the option switches themselves.